2001

EC01-106-A Nebraska Grain Sorghum Hybrid Tests 2001

Lenis Alton Nelson
University of Nebraska-Lincoln, lnelson1@unl.edu

Roger Wesley Elmore
University of Nebraska-Lincoln, roger.elmore@unl.edu

R. N. Klein
University of Nebraska-Lincoln, robert.klein@unl.edu

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NEBRAS...HUM HYBRID TESTS 2001

University of Nebraska–Lincoln
Institute of Agriculture and Natural Resources
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NEBRASKA GRAIN SORGHUM HYBRID TESTS

December 2001

AUTHORS

L. A. Nelson	Department of Agronomy, Lincoln
R. W. Elmore	South Central Research and Extension Center, Clay Center
R. N. Klein	West Central Research and Extension Center, North Platte
D. D. Baltensperger	Panhandle Research and Extension Center, Scottsbluff

ACKNOWLEDGMENTS

This circular is a progress report of grain sorghum trials conducted to obtain yield and other information for some of the hybrids being marketed. The 2001 season was the 44th year that private hybrids were included in these trials. Seed producers supported tests through fee payments.

Cooperating were the Agronomy Department and the South Central, West Central and Panhandle Research and Extension Centers. Acknowledgment is made to Extension Educators and others who assisted in these tests. Special acknowledgment is made to farmers who furnished land for the trials.

Conduct of experiments and publication of results is a joint effort of the Agricultural Research Division and the Cooperative Extension Service.

We want to acknowledge the State Climate Program at the University of Nebraska-Lincoln for providing the climate data used in this report. The reports of temperature and rainfall conditions at the various locations are found on pages 22-23.

We also wish to acknowledge the Nebraska Agricultural Statistics Service for data on crop acreages. Their data is included in the introduction on page 5.

We want to thank the people who provided technical support for this project, namely John A. Eis, Greg Dorn, Jeff Golus, George Hoffmeister, Glen Frickel, Ralph Klein and Bekele Abeyo.

CONTENTS

METRIC EQUIVALENTS

1 centimeter = 0.394 inches	cm = inches x 2.54
1 hectare = 2.471 acres	ha = acres x 0.405
1 kilogram = 2.205 pounds	kg = pounds x 0.454
1 hectoliter = 2.838 bushels	hl = bushels x 0.352

Kilogram/hectoliter = lb/bu x 1.287
Kilograms/hectare = bu/A x 62.78 (56# bu)

NEBRASKA GRAIN SORGHUM HYBRID TESTS
2001

Recent grain sorghum acreage and yields for Nebraska were as follows:

	1994	1995	1996	1997	1998	1999	2000	2001
Yield bu/A	98.0	54.0	95.0	83.0	98.0	89.0	73.0	84.0
Acres Harvested(000)	1,250	980	1,030	800	700	450	470	450

Total grain sorghum planted in Nebraska was 550,000 acres. The following are the statewide growing conditions for grain sorghum. By June 24, sorghum was virtually all planted with 95% emerged. Condition rated at 1% very poor, 3% poor, 35% fair, 56% good, and 5% excellent. Temperatures last week averaged two to five degrees below normals for the week. Precipitation was very light across state with the exception of the Southeast which ranged to two and a half inches. July 15, sorghum conditions rated 1% very poor, 5% poor, 40 % fair, 48% good, and 6% excellent. August 19, sorghum condition rated 3% very poor, 10 % poor, 39% fair, 39% good, and 9 % excellent. Ninety-one percent of the acreage was headed, compared to 91% last year and 88% average. The crop had turned color on 10% compared with 29% last year and 12% average. September 23, sorghum condition rated 3% very poor, 9% poor, 37% fair, 41% good, and 10% excellent. The crop had turned color on 95% of the acreage and compared with 99% last year and 95% average. Fifty-five percent was mature, compared with 88% last year and 51% average. October 14, sorghum was ninety-five percent mature, compared with 100% last year and 94% average. Harvest continued last week with 35% cut to date, behind 84% last year and 40% average.

PROCEDURE

Locations of trials are shown on the map (page 8). Names of cooperators are shown in Table A. Entrants and entries are shown in Tables B and C, respectively.

Seed for testing was furnished by the entrant. Seeding rates varied with location as shown in Table D. Seeding was accomplished with cone or air units mounted on commonly used row planters. Two-row or 4-row plots, 20 to 30 feet long were used.

Data on one-half bloom were obtained at three of the sites by visiting plots on alternate days during the flowering period. Grain moisture determinations were made at harvest at a time when differences between entries were relatively high. This gives an indication of relative grain drying rates.

Plant height and head exsertion readings were made at harvest. Lodging readings were taken at harvest. Reported yields are based on 56 pounds per bushel and 14 percent grain moisture.

Maturity of a hybrid is an important consideration in its adaptation to a given location. Entries were listed in data tables in order of decreasing yields. Maturity of a hybrid was recorded as plant bloom days or days from planting to half bloom. Variations do occur in maturity among trials and over years data. In analyzing yield evaluations, hybrids should be compared with those having similar maturities.

Variations in soil fertility, moisture conditions and other factors are found in each test area. This makes it impossible to measure yielding ability of hybrids with absolute accuracy. For this reason, small yield differences have little meaning. A statistical measure of differences required for

significance is given in each table. These differences were computed at the 5 percent levels of significance.

At the 5 percent level a difference of that magnitude would be expected once in twenty trials through chance alone. This is the third year of using a statistical procedure for minimizing spatial variability on the plot area.

RESULTS

The average performance of all entries at each 2001 test location is shown in Table D. All tests were machine harvested this year.

The average performance of hybrids included in trials over a three-year period is shown in Table E. This data indicates the effect of seasonal growing conditions on the characters measured. Stalk lodging data are included only for experiments where differentials among hybrids were observed.

Southeast (Page 14-15)

Thirty four entries were planted at two locations excluding farmer entries. Gage County farm entries were K-59-Y2 @ 130 bu/a, KS-711Y @ 103 bu/a, DeKalb 54 @ 167 bu/a, Producers 74 @ 122 bu/a, Producers 76 @ 141 bu/a, Pioneer 8505-N271 @ 121 bu/a. Average for all entries were 130 bu/a. Lancaster County farmer entries were K59-Y2 @ 98 bu/a, KS-711Y @ 86 bu/a. This test was planted in the same field as the South East Dryland Corn Hybrid trial. Average for all entries was 97 bu/a.

South Central (Pages 16-17)

Planted at Clay and Webster Counties. There were 30 entries, 4 replications, 4 rows, 30 inch wide, harvested the center two rows. Clay County was a gravity irrigated plot at the SCREC near Clay Center. Ridge tilled into soybean stubble with a Kinze planter. The average yield at Clay County was 145 bu/a. The average moisture was 16.8%. The Webster County dryland grain sorghum trial was planted in the same field as the South Central Dryland Corn Hybrid trial. Planted to wheat in 1999 and summer fallow 2000 which was slot planted with 4 row Kinze planter. Seventeen corn hybrids were included. Average corn yield was 138 bu/a with yields of individual hybrids ranging from 108 to 160 bu/acre. This compares to 108 to 148 bu/a yield range and 135 bu/acre average from the grain sorghum trial. See page 20 in Nebraska Corn Hybrid Tests - 2001 (E.C. 01-105) to see the complete corn results.

West Central (Pages 18-19)

Red Willow with 15 entries and Hayes County with 19 entries were no-till plots. Planted in wheat stubble from the 2000 harvest and fallowed in 1999. Planted at 75,000 seeds/acre. Red Willow County test averaged 85 bu/acre. Hayes County test average was 85 bu/a.

West (Page 20-21)

Twenty entries were tested in two Cheyenne County tests. Cheyenne County Tilled Grain Sorghum Hybrid Test averaged 85.4 bu/a. Cheyenne County No-tilled Grain Sorghum Hybrid Test averaged 95.7 bu/a. Planting was delayed by wet weather, followed by cool weather, so crop was very slow to germinate. After mid summer, above average rain fall and heat units. Long fall allowed crop to fill heads until October 5th freeze. Very few heads matured during the growing season.

Cultural Practices

Gage (dryland): No-till. Crop history: 2000 wheat. Fertilizer: 109 lb N. Herbicide: 2 qt Bicep. Insecticide: None. Cultivated, and hand hoed. Coordinates: Longitude -96.548100 Latitude 40.307100

Lancaster (dryland): No-till. Crop history: corn-soybean rotation. 100 lb/a N as anhydrous ammonia. Herbicide: Bicep. Insecticide: None. Hand hoed. Coordinates: -96.828200 40.829900

Clay (gravity irrigated): Crop history: Soybean 2000 and sorghum in 1999. Fertilizer: 100 lbs/a 11-52-0. 150 lbs/a anhydrous ammonia. Field preparation: preplant burn down. Herbicide: 1 qt/a of Roundup Ultra Max and AMS on 5/16/01 as a burn down preplant, 2.1 qt/a of Bicep II Magnum broadcast on 6/8/01. No insecticide used. Coordinates: -98.138000 40.815000

Webster (dryland): Crop history: Slot planted into summer fallow 2000, wheat in 1999. Fertilizer: 120 lb/a of Nitrogen as 32% liquid preplant. Herbicide: 2pt/a of Guardsman and 32 oz/a of Roundup Ultra Max early preplant and 2 pt/a of Guardsman preemergence. Insecticide: None. Hail storm in mid July stripped some of the leaves but did not hurt the yield too much. Coordinates: -98.57600 40.321000

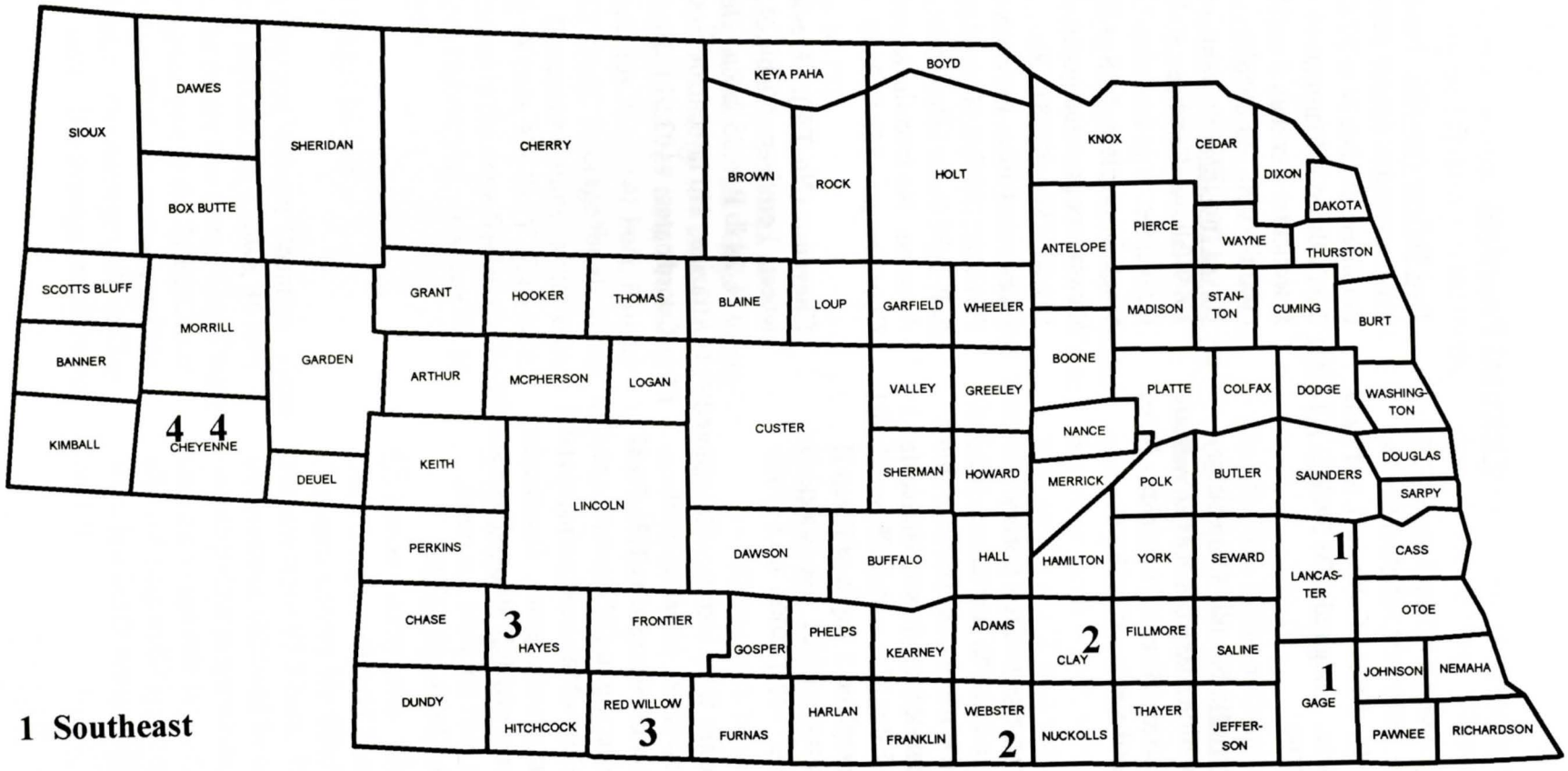
Red Willow (no-till): No-till into wheat stubble. Previous years: fallow-1999, wheat-2000. Fertilizer: 90 lb/a N as 32-0 preplant. Herbicide: 2 qt/a Bicep II Magnum +1 oz Balance Pre. Insecticide: Lorsban 8 oz/1000 feet. Coordinates: -100.674000 40.265530

Hayes (no-till): Previous crops: 2000-wheat, 1999-fallow. Fertilizer: 80 lb/a N preplant. Herbicides: 1 pt Roundup Ultra + 2.2 qt Bicep II Magnum preplant, 1.25 pt Buctril and 7 oz Paramount postemergence. Coordinates: -101.025880 40.581600

Cheyenne (till): Previous crop: 2000-wheat. Fertilizer: 50 lb/a N pre plant, starter of 7 lb N, 24 lb P + .75 lb Zn. Herbicide: Ramrod and Atrazine. No insecticide treatment was needed. Coordinates: -103.010650 41.229890

Cheyenne (No-Till): Previous crop: 2000-wheat. Fertilizer: 50 lb/a N pre plant, starter of 7 lb N, 24 lb P + .75 lb Zn. Herbicide: Ramrod and Atrazine. No insecticide treatment was needed. Coordinates: -103.011030 41.229870

Locations of 2001 Grain Sorghum Tests



1 Southeast

2 South Central

3 West Central

4 West

Grain Sorghum Characteristics 2001

Brand	Variety	Mat Rel To RS626	Grain Color	Height RS626=Med	Greenbug Resistance C	E	I
AgriPro	2468	Med	Bronze	Med	C	-	-
Asgrow	A571	Med Late	Red	Med Tall	-	-	-
Asgrow	Asgrow Eclipse	Med	Cream	Med	C	E	-
Asgrow	Asgrow Missile	Med Late	Bronze	Med	C	E	-
Asgrow	Asgrow Reward	V.Early	Bronze	Short	-	-	-
DEKALB	DK28E	V.Early	Bronze	Short	C	E	-
DEKALB	DK36	Early	Bronze	Med Short	C	E	-
DEKALB	DK44	Med	Bronze	Med	C	E	-
DEKALB	DK53	Med Late	Bronze	Tall	C	E	-
DEKALB	DKS54-00	Med Late	Bronze	Tall	C	E	I
Garst	5515	Med	Pale/Red	Med	-	-	-
Garst	5631Y	Early	Cream	-	-	E	-
KAYSTAR	G5400	Early	Red	Short	-	-	-
KAYSTAR	G5500	Med	Red	Short	-	-	-
KAYSTAR	G5600	Late	Bronze	Med	-	-	-
Midland Genetics	M-4614	Med	Cream	Med	-	E	-
Midland Genetics	M-4759Y	Med	Yellow	Tall	-	-	-
Midland Genetics	M-4774A	Med	Yellow	Med	-	-	-
NuPride Genetics	NGN EXP Hybrid 1	Early	Bronze	Med	C	-	-
NuPride Genetics	NGN EXP Hybrid 2	Early	Bronze	Med	C	-	-
NuPride Genetics	NGN EXP Hybrid 3	Early	Bronze	Med	C	-	-
NuPride Genetics	NGN EXP Hybrid 4	Med	Bronze	Med	C	-	-
NuPride Genetics	NGN EXP Hybrid 5	Med	Brown	Med	C	-	-
NuPride Genetics	NGN EXP Hybrid 6	Med	Red	Med	C	-	-
NuPride Genetics	NGN EXP Hybrid 7	Med	Red	Med	C	-	-
NuPride Genetics	NGN EXP Hybrid 8	Med	Red	Tall	C	-	-
Sorghum Partners	K35-Y5	Med.Early	Cream	Med	C	E	-
Sorghum Partners	K73-J6	Med Late	Red	Tall	C	E	-
Sorghum Partners	KS585	Med	Bronze	Med	C	E	-
Sorghum Partners	X828	Late	White	Tall	C	-	-
TRIUMPH	TR438	V.Early	Bronze	Med Short	C	E	-
TRIUMPH	TR461	Med.Early	Red	Med	C	E	-
TRIUMPH	TR465	Med.Early	Bronze	Med	C	E	I
TRIUMPH	TR481	Med Late	Red	Med Tall	C	E	-
UNL	1808 X NSS3-32	Med Late	White	Med Tall	-	-	-
UNL	1808A X N312R	Late	White	Tall	-	-	-
UNL	40638 X EFG-47	Med	White	Med	-	-	-
UNL	46038 X (N91/SN19)-4	Med	White	Med	-	-	-
UNL	46038 X 22808-11/22830	Med	White	Med	-	-	-
UNL	46038 X 22808-2	Med Late	White	Med	-	-	-
UNL	46038 X G60120-2	Med	White	Med	-	-	-
UNL	N122A X N398R	Med	Cream	Med	-	-	-
UNL	N123A X 1038R	Early	White	Short	-	-	-
UNL	N123A X N248R	Early	White	Short	-	-	-
UNL	N123A X N530R	Early	White	Short	-	-	-
UNL	N250A X N530R	Early	White	Short	-	-	-
UNL	N250A X N248R	Early	White	Short	-	-	-
UNL	N250R X 1038R	Early	White	Short	-	-	-
UNL	N251A X 1038R	Early	Bronze	Short	-	-	-
UNL	N252A X 1038R	Early	Cream	V.Short	-	-	-
UNL	N252A X N398R	Med.Early	cream	Med	-	-	-
UNL	N252A X N530R	Early	Cream	V.Short	-	-	-
UNL	N310 X N398R	Med	Cream	Short	-	-	-
UNL	N310 X N530R	Early	White	Short	-	-	-
UNL	N344 X N398R	Med	Cream	Med Tall	-	-	-
UNL	W X N312R	Med Late	Red	Tall	-	-	-

Table A. Location and Cooperators. 2001 Nebraska Grain Sorghum Performance Tests.

Location	Soil Type/Herbicide	Cooperator
Southeast		
Gage (dryland)	Crete silt loam	Victor Bade
	Bicep	Beatrice
Lancaster (dryland)	Wymore silty clay loam	Gary Hellerich
	Bicep	Valparaiso
South Central		
Clay (irrigated)	Hastings silt loam	SCREC
	Bicep II Magnum	Clay Center
Webster (dryland)	Crete silt loam	Brian & Keith Burns
	Roundup, Guardsman	Bladen
Southwest		
Red Willow (no-till)	Holdrege & Keith silt loam	Randy Peters
	Bicep II Magnum, Balance	McCook
Hayes (no-till)	McCash very fine sandy loam	Kim Lawson
	Bicep II Magnum, Butril, Paramount	Hayes Center
West		
Cheyenne (tilled)	Keith loam	High Plains Ag. Lab.
	Ramrod, Atrazine	Sidney
Cheyenne (no-till)	Keith loam	High Plains Ag. Lab.
	Ramrod, Atrazine	Sidney

Table B. Entrants. Nebraska Grain Sorghum Performance Tests. 2001

Brand	Company	Address
-----	Agricultural Research Div.,UNL	Lincoln, NE 68583
DeKalb/Asgrow	Monsanto	7159 N. 247 W., Mt.Hope, KS. 67108
Garst/AgriPro	Garst/AgriPro Seed Company	1104 W 18th Rd, Aurora, NE 68818
Kaystar	Kaystar Seed	P. O. Box 947, Huron, SD 57350
Midland	Midland Genetics	980 Hwy 15, Hope, KS 67451
NGN	NuPride Genetics Network	P. O. Box 830911, Lincoln, NE 68583-0911
Sorghum Partners	Sorghum Partners, Inc.	P. O. Box 189, New Deal, TX 79350
Triumph	Triumph Seed Co., Inc.	P. O. Box 1050, Ralls, TX 79357

Table C. Grain Sorghum entries and zones entered in 2001

Brand	Hybrid	Zone *				Brand	Hybrid	Zone *			
AgriPro	2468	.	I	.	.	Sorghum Partners	KS585	A	I	.	.
Asgrow	A571	A	I	.	.	Sorghum Partners	X828	A	I	.	.
Asgrow	Asgrow Eclipse	.	.	B		Triumph	TR438	.	.	.	.
Asgrow	Asgrow Missile	A	I	.	.	Triumph	TR461	A	I	.	.
Asgrow	Asgrow Reward	.	.	.	D	Triumph	TR465	.	I	B	.
DeKalb	DK28E	.	.	.	D	Triumph	TR481	A	.	.	.
DeKalb	DK36	.	.	B	.	UNL	1808 X NSS3-32	A	I	.	.
DeKalb	DK44	.	.	B	.	UNL	1808A X N312R	A	I	.	.
DeKalb	DK53	A	I	.	.	UNL	40638 X EFG-47	.	.	B	.
DeKalb	DKS54-00	A	I	.	.	UNL	46038 X (N91/SN19)-4	.	.	B	.
Garst	5515	A	I	B	.	UNL	46038 X 22808-11/22830	.	.	B	.
Garst	5631Y	A	.	.	.	UNL	46038 X 22808-2	.	.	B	.
Kaystar	G5400	A	I	.	.	UNL	46038 X G60120-2	A	I	.	.
Kaystar	G5500	A	I	.	.	UNL	N122A X N398R	A	.	.	.
Kaystar	G5600	A	I	.	.	UNL	N123A X 1038R	.	.	.	D
Midland Genetics	M-4614	A	I	.	.	UNL	N123A X N248R	.	.	.	D
Midland Genetics	M-4759Y	A	I	.	.	UNL	N123A X N530R	.	.	.	D
Midland Genetics	M-4774A	A	I	.	.	UNL	N250A X N530R	.	.	.	D
NuPride Genetics	NGN EXP Hybrid 1	A	I	B	D	UNL	N250A X N248R	.	.	.	D
NuPride Genetics	NGN EXP Hybrid 2	A	I	B	D	UNL	N250R X 1038R	.	.	.	D
NuPride Genetics	NGN EXP Hybrid 3	A	I	B	D	UNL	N251A X 1038R	.	.	.	D
NuPride Genetics	NGN EXP Hybrid 4	A	I	B	D	UNL	N252A X 1038R	.	.	.	D
NuPride Genetics	NGN EXP Hybrid 5	A	I	B	D	UNL	N252A X N398R	A	.	.	.
NuPride Genetics	NGN EXP Hybrid 6	A	I	B	D	UNL	N252A X N530R	.	.	.	D
NuPride Genetics	NGN EXP Hybrid 7	A	I	B	D	UNL	N310 X N398R	A	.	.	.
NuPride Genetics	NGN EXP Hybrid 8	A	I	B	D	UNL	N310 X N530R	.	.	.	D
Sorghum Partners	K35-Y5	A	I	.	.	UNL	N344 X N398R	A	.	.	.
Sorghum Partners	K73-J6	A	I	.	.	UNL	W X N312R	A	I	.	.

* Zone A = Southeast, Zone I = South Central, Zone B = West Central, Zone D = West Dryland

Table D. Grain Sorghum. Average performance at each test location. 2001

Location	Planted	Harvested	Grain yield bu/a	Planting to bloom days	Plant height inches	Head exsertion inches	Test weight lb/bu
Southeast							
Gage (dryland)	June 9	Oct. 15	130	60	52	4.1	60.0
Lancaster (dryland)	May 29	Oct. 16	97	66	43	2.3	58.8
Average 2 tests	---	---	114	63	48	3.2	59.4
South Central							
Clay (irrigated)	June 8	Oct. 26	145	68	55	5.8	59.5
Webster (dryland)	June 11	Oct. 25	135	---	53	5.3	59.8
Average 2 tests	---	---	140	68	54	5.6	59.6
West Central							
Red Willow	May 31	Nov. 1	85	---	45	---	57.0
Hayes	May 31	Nov. 1	75	---	45	---	57.5
Average 2 tests	---	---	80	---	45	---	57.3
West							
Cheyenne (tilled)	June 12	Oct. 22	85	---	39	---	43.5
Cheyenne (no-till)	June 12	Oct. 22	96	---	40	---	42.3
Average 2 tests	---	---	91	---	39	---	42.9

Table E. Sorghum performance. Average for common entries over years within tests. Three years. 1999 - 2001.

Test	Year	Grain yield bu/a	Planting to bloom days	Plant height inches	Head exsertion inches	Early-grain moisture %	Test weight lbs/bu
Southeast (5 entries)							
	1999	121	73	49	6	19.2	58.9
	2000	120	82	49	4	18.2	59.0
	2001	121	64	51	3	16.1	59.7
South Central (4 entries)							
	1999	145	76	51	5	14.5	60.3
	2000	141	73	53	4	14.9	60.7
	2001	145	68	53	5	15.8	60.0
West Central (2 entries)							
	1999	110	--	47	--	12.0	57.8
	2000	26	--	36	--	12.1	55.3
	2001	77	--	45	--	12.6	56.9
West (6 entries)							
	2000	58	--	30	--	21.0	46.7
	2001	91	--	35	--	17.0	43.8

Southeast Grain Sorghum Hybrid Test - 2001
Gage and Lancaster Counties

IANR

Brand	Hybrid	Yield			Days to bloom	Bushel weight	Plant height	Head excertion	Grain moisture	Plant lodging	Seeds per
		Average bu/a	Gage bu/a	Lancaster bu/a		lb/bu	inches	inches	pct	pct	Pound
-----	Wheatland X N312R	148.9	160.5 *	137.3 **	64	61.6	58	4	14.7	0	13500
DEKALB Genetics	DKS54-00	147.2	163.8 **	130.5 *	65	59.6	52	4	16.8	0	14300
TRIUMPH	TR 461	142.0	162.0 *	121.9 *	63	61.1	51	3	14.5	0	17000
-----	1808 X N312R	132.8	159.1 *	106.4	68	58.6	61	4	17.5	0	15300
-----	46038 X G60120-2	130.0	133.2	126.8 *	61	60.3	57	6	14.8	13	13900
SORGHUM PARTNERS	K73-J6	129.7	160.6 *	98.7	62	59.9	53	4	14.8	0	15000
NuPride Genetics	NGN EXP Hybrid 5	127.8	157.0 *	98.6	66	59.9	54	3	15.6	0	15300
GARST	5515	125.7	144.9 *	106.5	61	58.8	46	3	14.6	0	16100
SORGHUM PARTNERS	KS585	125.0	147.6 *	102.4	59	62.0	44	3	14.0	0	16900
SORGHUM PARTNERS	X828	123.7	150.1 *	97.2	68	58.8	52	3	15.5	0	18100
KAYSTAR	G5600	123.5	137.8	109.2	66	59.8	49	3	15.0	0	15400
-----	N122A X N398R	122.1	131.6	112.5	64	59.4	48	3	15.9	0	16000
MIDLAND	M-4774	120.1	124.7	115.5	61	60.2	45	4	13.9	1	16000
NuPride Genetics	NGN EXP Hybrid 7	118.1	126.1	110.0	62	60.5	46	2	14.1	0	19200
ASGROW	A571	116.5	125.4	107.6	65	58.7	49	3	14.7	0	15100
NuPride Genetics	NGN EXP Hybrid 4	115.5	115.4	115.5	62	60.1	43	3	14.2	0	15700
DEKALB Genetics	DK-53	115.3	131.3	99.3	65	59.8	50	3	17.5	0	12600
NuPride Genetics	NGN EXP Hybrid 6	112.1	113.4	110.7	63	61.1	48	3	15.3	0	17800
GARST	5631Y	111.9	128.8	94.9	61	61.1	43	3	13.7	0	18400
MIDLAND	M-4614	109.7	119.8	99.6	61	60.5	44	3	14.3	0	16600
NuPride Genetics	NGN EXP Hybrid 8	108.1	130.6	85.5	65	59.6	47	2	15.5	0	14100
ASGROW	Missile	107.9	129.2	86.5	65	59.8	48	2	16.1	0	13300
TRIUMPH	TR 481	107.6	146.7	68.5	66	58.9	54	4	17.5	0	14700
-----	N252A X N398R	107.1	123.3	90.9	62	58.6	49	4	14.4	0	18100
-----	N344A X N398R	106.1	125.2	86.9	67	58.0	55	5	18.4	0	13900
SORGHUM PARTNERS	K35-Y5	103.7	114.6	92.8	58	59.2	40	5	12.7	0	21000
KAYSTAR	G5500	100.2	118.0	82.4	63	59.9	45	3	14.9	0	16600
-----	N310A X N398R	99.7	110.8	88.6	64	58.3	44	2	14.3	0	19300
NuPride Genetics	NGN EXP Hybrid 2	97.9	107.9	87.9	57	58.0	38	3	12.8	0	18900
NuPride Genetics	NGN EXP Hybrid 3	97.4	90.7	104.0	60	59.4	43	4	13.7	0	16700
-----	1808 X NSS3-32	94.1	120.1	68.1	68	57.0	55	3	20.1	0	13900
KAYSTAR	G5400	80.7	100.7	60.7	62	59.3	45	4	14.2	0	14800
MIDLAND	M-4759Y	77.1	107.7	46.5	68	55.1	49	4	20.1	0	14100
NuPride Genetics	NGN EXP Hybrid 1	72.9	81.8	63.9	54	55.8	35	2	12.2	0	18300
Average all entries		113.5	129.6	97.2	63	59.4	48	3	15.2	0	16030
Dif. Req. for Sig. 5%		25.3	24.0	16.5	5	2.1	8	1	2.6	NS	2868

**** denotes top yielding hybrid at each location**

*** denotes hybrids not significantly different than top yielding hybrid**

Southeast Grain Sorghum Hybrid Test 1999-2001

IANR

Brand	Hybrid	Grain Yield bu/a	Days to bloom	Bushel weight lb/bu	Plant height inches	Head exsertion inches	Grain moisture pct	Seeds per pound
		2 Year Averages						
-----	Wheatland X N312R	138.5	72	60.1	56	3	16.1	15100
-----	N122A X N398R	124.0	72	59.5	48	5	16.0	16100
DEKALB Genetics	DK-53	122.2	74	59.3	51	2	19.1	13900
ASGROW	A571	121.8	74	58.4	48	4	16.3	15900
GARST	5515	118.9	69	59.3	46	5	15.0	17100
ASGROW	Missile	113.4	73	59.3	48	2	16.8	15700
TRIUMPH	TR 481	109.8	76	58.8	51	5	18.7	15200
Average all entries		121.2	73	59.2	50	4	16.2	15589
Difference req. for sig. 5%		NS	1	NS	1	NS	1.1	NS
		3 Year Averages						
-----	Wheatland X N312R	138.6	73	60.0	56	4	16.7	14500
DEKALB Genetics	DK-53	123.1	75	59.0	50	3	19.8	13700
GARST	5515	115.9	68	59.3	45	5	15.0	16200
ASGROW	Missile	115.3	74	58.9	47	3	18.2	15600
TRIUMPH	TR 481	110.2	76	58.8	51	5	19.4	15200
Average all entries		121.2	73	59.2	50	4	17.8	15017
Difference req. for sig. 5%		4.8	1	NS	1	NS	0.6	NS

South Central Grain Sorghum Hybrid Test - 2001
Clay and Webster Counties

IANR

Brand	Hybrid	Yield			Days to bloom	Bushel weight lb/bu	Plant height inches	Head excertion inches	Grain moisture pct
		Average bu/a	Clay bu/a	Webster bu/a					
MIDLAND	M-4774	157.1	166.2 *	147.9 **	65	59.7	53	6	13.3
SORGHUM PARTNERS	KS585	157.0	168.2 *	145.8 *	64	61.0	51	4	16.4
SORGHUM PARTNERS	K73-J6	155.1	171.9 **	138.2 *	66	60.0	57	7	15.5
NuPride Genetics	NGN EXP Hybrid 5	152.9	161.5 *	144.3 *	69	60.1	62	8	14.6
SORGHUM PARTNERS	X828	151.6	164.8 *	138.4 *	74	59.3	55	6	14.6
NuPride Genetics	NGN EXP Hybrid 7	151.3	161.4 *	141.1 *	65	60.4	51	2	16.7
TRIUMPH	TR 461	149.3	156.5 *	142.1 *	67	60.4	57	5	14.6
TRIUMPH	TR 465	148.5	155.9 *	141.0 *	67	61.0	55	6	14.6
GARST	5515	146.9	147.3	146.4 *	64	59.7	49	5	16.6
DEKALB Genetics	DKS54-00	145.8	156.1 *	135.5 *	73	59.7	59	7	16.3
SORGHUM PARTNERS	K35-Y5	145.7	154.9	136.4 *	64	58.4	46	6	14.4
NuPride Genetics	NGN EXP Hybrid 6	145.4	155.8 *	135.0 *	66	60.2	57	5	13.9
NuPride Genetics	NGN EXP Hybrid 8	145.4	159.6 *	131.2	69	59.4	55	6	14.8
ASGROW	Missile	142.8	147.1	138.5 *	71	60.5	52	4	17.2
ASGROW	A571	141.3	148.8	133.7 *	72	58.9	58	8	14.3
DEKALB Genetics	DK-53	140.7	140.0	141.4 *	71	59.3	56	5	14.8
NuPride Genetics	NGN EXP Hybrid 4	138.3	132.7	143.8 *	66	60.5	49	6	16.4
KAYSTAR	G5600	137.5	142.6	132.3	72	59.7	56	6	14.4
-----	1808 X NSS3-32	136.9	145.9	127.8	75	59.3	66	7	15.6
MIDLAND	M-4614	136.8	134.7	138.9 *	66	60.5	48	5	15.1
-----	1808 X N312R	136.8	140.8	132.7	75	58.1	69	7	15.1
KAYSTAR	G5500	133.7	144.1	123.3	67	60.6	49	6	18.1
-----	Wheatland X N312R	131.8	127.7	135.9 *	69	60.4	65	6	14.0
NuPride Genetics	NGN EXP Hybrid 3	131.1	128.5	133.7	65	59.3	48	7	14.3
KAYSTAR	G5400	125.0	128.3	121.7	64	59.8	53	5	16.7
AGRIPRO	AP 2468	120.3	113.7	126.8	66	60.3	48	5	14.1
NuPride Genetics	NGN EXP Hybrid 2	120.0	111.9	128.1	63	57.7	39	4	16.9
MIDLAND	M-4759Y	115.9	123.8	108.0	75	60.0	54	7	15.9
NuPride Genetics	NGN EXP Hybrid 1	108.7	97.2	120.2	63	56.9	38	4	14.5
Average all entries		139.8	144.7	134.9	68	59.6	54	6	15.3
Dif. Req. for Sig. 5%		17.4	16.8	14.1	NS	1.4	11	2	NS

**** denotes top yielding hybrid at each location**

*** denotes hybrids not significantly different than top yielding hybrid**

South Central Grain Sorghum Hybrid Test 1999-2001

IANR

Brand	Hybrid	Grain Yield bu/a	Days to bloom	Bushel weight lb/bu	Plant height inches	Head exsertion inches	Grain moisture pct	Seeds per pound
				2 Year Averages				
DEKALB Genetics	DK-53	145.9	72	60.3	56	4	15.7	14200
ASGROW	Missile	144.4	73	60.7	53	3	16.3	15100
TRIUMPH	TR 461	144.2	70	60.4	54	4	14.1	20000
GARST	5515	136.9	68	60.0	49	6	15.2	17400
ASGROW	A571	134.6	74	59.3	53	5	14.9	16300
-----	Wheatland X N312R	132.4	72	60.9	62	4	14.6	14200
Average all entries		139.7	71	60.3	55	4.0	15.1	16200
Difference req. for sig. 5%		NS	NS	NS	NS	NS	NS	NS
				3 Year Averages				
ASGROW	Missile	147.3	75	60.3	53	4	15.9	15200
DEKALB Genetics	DK-53	145.9	75	60.2	56	4	15.8	14100
TRIUMPH	TR 461	144.4	72	60.6	53	4	14.1	17200
GARST	5515	136.6	68	60.1	48	6	14.5	15900
Average all entries		143.6	72	60.3	52	5.0	15.1	15600
Difference req. for sig. 5%		NS	NS	NS	1	NS	NS	NS

West Central Grain Sorghum Hybrid Test - 2001
Red Willow and Hayes Counties

IANR

Brand	Hybrid	Yield			Bushel weight	Plant height	Grain moisture	Plant lodging
		Average bu/a	Red Willow bu/a	Hayes bu/a	lb/bu	inches	pct	score
NuPride Genetics	NGN EXP Hybrid 4	101.0	107.3 **	94.6 **	56.8	46	12.6	0
TRIUMPH	TR 465	88.1	104.6 *	71.6	58.3	44	12.8	1
NuPride Genetics	NGN EXP Hybrid 5	85.8	85.0	86.5 *	57.1	50	12.7	1
NuPride Genetics	NGN EXP Hybrid 3	85.1	87.2	83.0 *	56.7	44	12.3	7
GARST	5515	83.8	98.9 *	68.6	57.1	46	13.3	1
DEKALB Genetics	DK-36	82.6	79.7	85.5 *	57.3	45	13.0	17
NuPride Genetics	NGN EXP Hybrid 7	81.6	91.0	72.2	57.9	46	12.7	1
TRIUMPH	TR 438	78.4	77.3	79.4	56.5	46	12.4	16
NuPride Genetics	NGN EXP Hybrid 6	77.0	82.3	71.6	58.4	47	12.7	9
ASGROW	Eclipse	76.8	84.3	69.3	57.1	43	13.5	0
DEKALB Genetics	DK-44	76.0	87.0	64.9	57.3	45	12.8	1
ASGROW	Reward	74.5	71.6	77.3	57.5	39	12.2	6
NuPride Genetics	NGN EXP Hybrid 8	70.4	83.1	57.7	56.9	47	12.6	9
NuPride Genetics	NGN EXP Hybrid 2	70.3	68.2	72.3	56.8	37	12.2	1
NuPride Genetics	NGN EXP Hybrid 1	66.8	71.9	61.6	57.0	37	12.2	1
Average all entries		79.7	85.3	75.3	57.3	45	12.7	4
Dif. Req. for Sig. 5%		NS	15.3	12.9	NS	5	NS	NS

**** denotes top yielding hybrid at each location**

*** denotes hybrids not significantly different than top yielding hybrid**

West Central Grain Sorghum Hybrid Test 1999-2001

IANR

Brand	Hybrid	Grain Yield bu/a	Bushel weight lb/bu	Plant height inches	Grain moisture pct	Plant lodging pct
		2 Year Averages				
TRIUMPH	TR 438	53.2	56.0	42	12.3	16
DEKALB Genetics	DK-44	49.5	56.3	39	12.5	1
Average all entries		51.3	56.1	40	12.4	8.5
Difference req. for sig. 5%		NS	NS	NS	NS	NS
		3 Year Averages				
TRIUMPH	TR 438	71.8	56.5	44	12.2	16
DEKALB Genetics	DK-44	70.0	56.8	41	12.3	1
Average all entries		70.9	56.7	42	12.2	8.5
Difference req. for sig. 5%		NS	NS	NS	NS	NS

Cheyenne County Grain Sorghum Hybrid Tests - 2001

IANR

Brand	Hybrid	Yield			Bushel weight	Plant height	Grain moisture
		Average bu/a	Tilled bu/a	No-Till bu/a	lb/bu	inches	pct
ASGROW	Reward	110.7	100.3 *	121.1 **	46.2	39	17.2
NuPride Genetics	NGN EXP Hybrid 2	110.6	106.2 *	115.0 *	42.0	38	16.6
DEKALB Genetics	DK-28E	109.6	99.3 *	119.9 *	49.2	39	15.9
NuPride Genetics	NGN EXP Hybrid 4	109.2	114.0 **	104.3	41.4	44	20.0
NuPride Genetics	NGN EXP Hybrid 1	105.2	101.4 *	108.9 *	49.2	36	18.6
-----	N251A X 1038R	98.6	91.4	105.7 *	39.1	36	16.0
NuPride Genetics	NGN EXP Hybrid 3	97.2	91.4	103.0	40.3	41	17.0
-----	N310A X N530R	96.1	84.2	107.9 *	45.0	45	18.8
-----	N250A X N248R	94.2	85.7	102.6	47.5	35	18.0
NuPride Genetics	NGN EXP Hybrid 7	93.6	96.0 *	91.1	37.9	47	19.2
-----	N250A X 1038R	92.7	88.9	96.5	42.0	34	16.9
-----	N252A X 1038R	92.7	91.2	94.1	39.9	35	16.7
-----	N250A X N530R	90.1	84.9	95.2	47.0	39	19.4
-----	N123A X N248R	90.0	79.7	100.2	48.8	34	16.7
-----	N252A X N530R	89.1	85.9	92.3	47.2	40	20.6
-----	N123A X N530R	79.9	68.2	91.6	50.3	39	19.8
NuPride Genetics	NGN EXP Hybrid 6	77.2	82.8	71.5	39.4	46	20.0
-----	N123A X 1038R	75.7	55.3	96.0	45.6	35	17.7
NuPride Genetics	NGN EXP Hybrid 8	59.4	60.9	57.9	32.6	41	18.7
NuPride Genetics	NGN EXP Hybrid 5	39.2	39.9	38.4	28.2	49	21.8
Average all entries		90.5	85.4	95.7	39.2	43	18.3
Dif. Req. for Sig. 5%		25.2	21.4	16.2	6.3	8	2.3

**** denotes top yielding hybrid at each location**

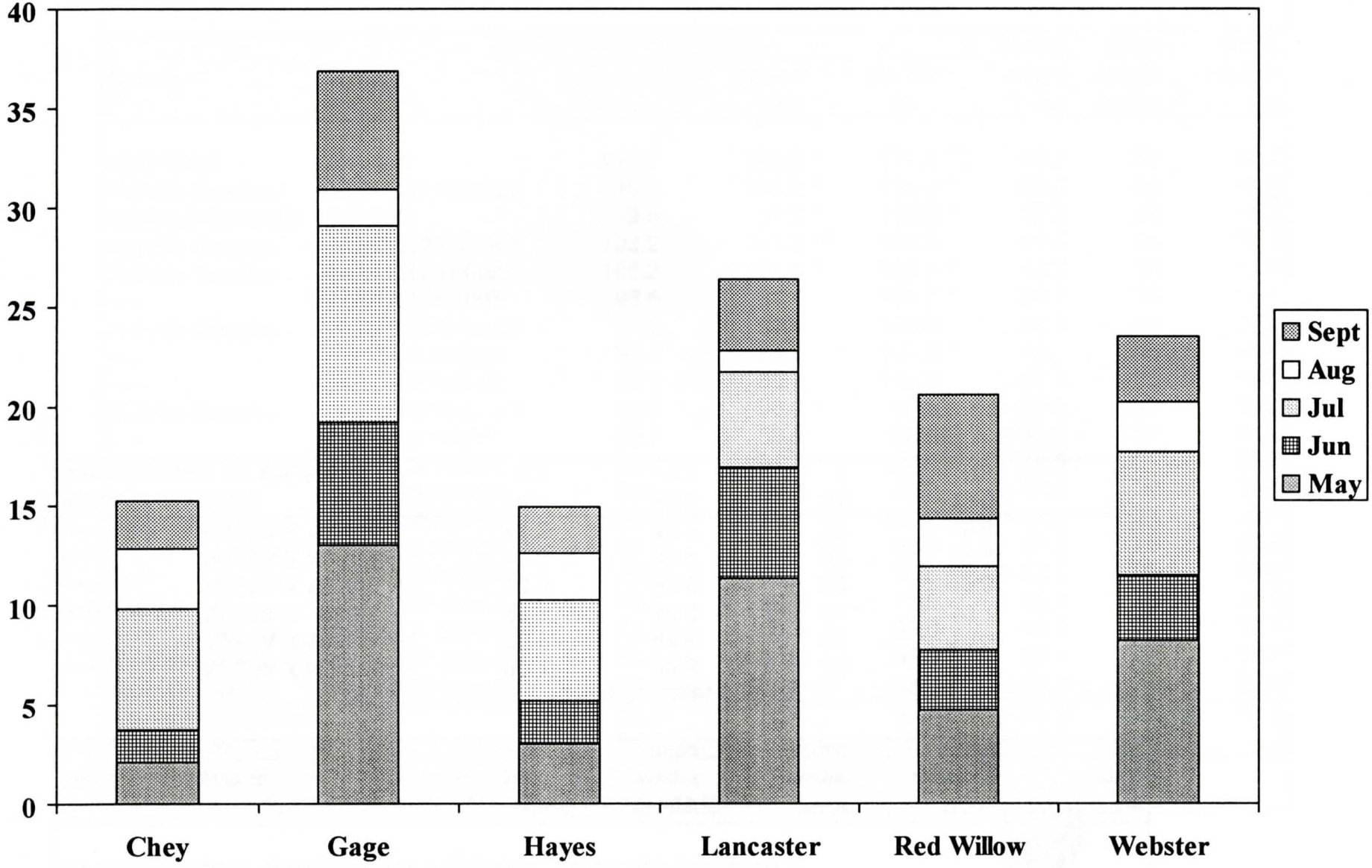
*** denotes hybrids not significantly different than top yielding hybrid**

West Grain Sorghum Hybrid Test 2000-2001

IANR

Brand	Hybrid	Grain Yield bu/a	Bushel weight lb/bu	Plant height inches	Grain moisture pct	Plant lodging pct
		2 Year Averages				
-----	N250A X N248R	80.1	48.6	32	18.2	0
-----	N250A X 1038R	79.9	44.8	32	19.0	0
-----	N251A X 1038R	78.3	40.3	34	19.7	0
-----	N252A X 1038R	73.8	42.6	32	19.8	0
-----	N123A X N248R	71.0	48.7	32	17.9	0
-----	N123A X 1038R	61.3	46.7	32	19.6	0
Average all entries		74.1	45.3	32	19.0	0.0
Difference req. for sig. 5%		3.2	1.1	1	NS	NS

Precipitation in inches at 2001 sorghum test sites



Heat units at 2001 grain sorghum test sites